

Section I (Amendments to the Claims)

Please cancel claims 4, 7, 18, and 21 without prejudice, and add new claims 30-35.

Please amend claims 1, 8 and 20 as set forth in the below listing of the claims.

Upon entry of the present amendment, the claims will stand as follows. The following listing of the claims will replace all prior versions and listings of the claims in the present application:

Complete Listing of the Claims

1. (Currently amended) A diagnostic conjugate for tumor imaging having the structure:
transmembrane module (TPU) -address module (AS) -signalling module (~~SM~~), (SM);
wherein
- the transmembrane module is a cell-penetrating transport peptide capable of penetrating the plasma membrane; - the address module is a peptide nucleic acid (PNA) antisense to and which hybridizes hybridizing with a mRNA selected from a group consisting of c-myc-, c-ras-, hern-, sst1, or sst2-mRNA; ,the expression or mis-expression of which is associated with a tumor disease; and - the signaling signalling module is a compound trapping selected from the group consisting of Gadolinium, iron and fluorine.
2. (Original) The diagnostic conjugate of claim 1, wherein the transmembrane module (TPU) is a human transmembrane peptide.
3. (Previously Presented) The diagnostic conjugate of claim 2, wherein the transmembrane module (TPU) comprises the amino acid sequence KMTRQTWWHRIKHKC (SEQ ID NO: 2); MTRQTFWHRIKHKC (SEQ ID NO: 3) or KHKIRHWFTQRTMC (SEQ ID NO: 4).
- 4.-7. (Cancelled)
8. (Currently amended) The diagnostic conjugate of claim 17, wherein the peptide nucleic acid (PNA) comprises the sequence H₂N-ATGCCCCTCAACGTTAGCTT-COOH (SEQ ID NO: 5).
9. (Cancelled)
10. (Previously presented) The diagnostic conjugate of claim 1, wherein the transmembrane module (TPU) is coupled to the address module (AS) via a covalently cleavable spacer I and/or the address module (AS) is coupled to the signalling module (SM) or a compound trapping the signalling module (SM) via a covalently non-cleavable spacer II.

11. (Original) The diagnostic conjugate of claim 10, wherein spacer I comprises a cleavable disulfide bridge.
12. (Original) The diagnostic conjugate of claim 10, wherein spacer I and/or spacer II comprises polylysine or polyglycine.
13. (Previously presented) The diagnostic conjugate of claim 12, wherein spacer II carries an FITC-label.
14. (Previously presented) The diagnostic conjugate of claim 1 having the following structure: transmembrane module (TPU) - spacer I comprising a cleavable disulfide bridge - address module (AS) - spacer II - signalling module (SM) or compound trapping the signalling module (SM).
15. (Previously presented) A diagnostic composition containing a diagnostic conjugate of claim 1.
- 16.-18. (Cancelled)
19. (Previously presented) A diagnostic composition containing a diagnostic conjugate of claim 14.
20. (Currently Amended) A diagnostic conjugate for tumor imaging having the structure:

transmembrane module (TPU)-address module (AS)-signalling module (SM), wherein - the transmembrane module (TPU) is a cell-penetrating transport peptide ~~which can penetrate~~ capable of penetrating the plasma membrane selected from the group consisting of penetratin and transportan; - the address module (AS) is a peptide nucleic acid (PNA) antisense to and which hybridizes hybridizing with a mRNA of a gene selected from the group consisting of c-myc-, c-ras-, hern-, sst1 or sst2; and - the signalling module (SM) is a compound trapping ~~selected from the group consisting of Gadolinium, iron and fluorine.~~
21. (Cancelled)

22. (Previously Presented) The diagnostic conjugate of claim 20, wherein the transport peptide comprises the amino acid sequence KMTRQTWWHRIKHKC (SEQ ID NO: 2); MTRQTFWHRIKHKC (SEQ ID NO: 3) or KHKIRHWFTQRTMC (SEQ ID NO: 4).
23. (Previously Presented) The diagnostic conjugate of claim 20, wherein the peptide nucleic acid (PNA) comprises the sequence H₂N-ATGCCCCCTCAACGTTAGCTT-COOH (SEQ ID NO: 5).
24. (Previously Presented) The diagnostic conjugate of claim 20, wherein the transmembrane module (TPU) is coupled to the address module (AS) via a covalently cleavable spacer I and/or the address module (AS) is coupled to the signalling module (SM) or a compound trapping the signalling module (SM) via a covalently non-cleavable spacer II.
25. (Previously Presented) The diagnostic conjugate of claim 24, wherein spacer I comprises a cleavable disulfide bridge.
26. (Previously Presented) The diagnostic conjugate of claim 24, wherein spacer I and/or spacer II comprises polylysine or polyglycine.
27. (Previously Presented) The diagnostic conjugate of claim 25, wherein spacer II carries an FITC-label.
28. (Previously Presented) The diagnostic conjugate of claim 20 having the following structure: transmembrane module (TPU) - spacer I comprising a cleavable disulfide bridge - address module (AS) - spacer II - signalling module (SM) or compound trapping the signalling module (SM).
29. (Previously Presented) A diagnostic composition containing a diagnostic conjugate of claim 20 and pharmaceutically acceptable carrier.
30. (New) The diagnostic conjugate of claim 1, wherein the compound trapping Gadolinium is diethylenetriaminetriaminepentaacetic acid (DTPA).
31. (New) The diagnostic conjugate of claim 20, wherein the compound trapping Gadolinium is diethylenetriaminetriaminepentaacetic acid (DTPA).

32. (New) A diagnostic conjugate for tumor imaging having a structure transmembrane module (TPU) –address module (AS) –signalling module (SM), wherein –the transmembrane module (TPU) is a cell penetrating transport peptide of human origin which can penetrate the plasma membrane;
- the address module (AS) is a peptide nucleic acid (PNA) antisense to and hybridizing with a mRNA of a gene selected from the group consisting of c-myc-, c-ras-, henn-, sst1 or sst2; and –the signalling module (SM) is a compound trapping Gadolinium.
33. (New) The diagnostic conjugate of claim 32, wherein the peptide nucleic acid (PNA) comprises the amino acid sequence KMTRQTWWHRIKHKC (SEQ ID NO: 2); MTRQTFWHRIKHKC (SEQ ID NO: 3) or KHKIRHWFTQRTMC (SEQ ID NO: 4).
34. (New) The diagnostic conjugate of claim 32, wherein the peptide nucleic acid (PNA) comprises the sequence H₂N-ATGCCCTCAACGTTAGCTT-COOH (SEQ ID NO: 5).
35. (New) The diagnostic conjugate of claim 32, wherein the compound trapping Gadolinium is diethylenetriaminetriaminepentaacetic acid (DTPA).

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